

Fig. 30: Locations of Major Military Structures and Landscape Modifications (Facing Southeast).

Construction of Station “S” was part of a larger plan to expand and upgrade O`ahu’s coastal defense systems prompted by accelerated technological advances in armament and firepower made during World War I (Thompson 1980: 71). As with earlier defense systems, some constructed on O`ahu as early as 1907, these plans focused primarily on protecting Honolulu Harbor and Pearl Harbor and were conceived to defend from attacks by sea (Dorrance 1995). These harbors were viewed as vital to the United States military presence in the Pacific and, given Hawai`i’s relatively new status as a Territory, were considered potentially vulnerable to attack. This plan also included establishing a Ka`ena Point Military Reservation in 1923 (Bennette 2005: 75). After being expanded in 1924, the 114-acre Reservation included that portion of the point that lies between the railway easement and a ridge promontory (approximately 800-feet above sea level (Fig. 1).

Station “S” was expanded in 1934 when a double base end station was constructed directly below the original Station “S” fire control station (Bennette 2005: 76). This single story, reinforced-concrete station (16 feet wide, 15 feet deep) was built below ground and housed two observing instruments (i.e., depressed position finders) positioned to operate through three narrow observation slits under the roof overhang. Similar observing instruments and bunks were added to the original fire control station in 1936. The 1934 base end station was to send position data to the artillery unit at Battery Hatch, Fort Barrette, on Pu`u Kapolei until 1942 when it was reassigned to artillery positions at Batteries Brodie and Opaepa located inland of Hale`iwa. The concrete structures of the 1924 control station and the 1934 base end station apparently remain intact.

Camp Ka`ena

After the attack on Pearl Harbor on December 7, 1941 and the commencement of World War II, military personnel were almost immediately stationed at Ka`ena Point to man gun and searchlight positions (Bennett 2005: 79-82, 93-100). Defending the beaches from invasion and anti-aircraft defense became a priority in addition to supporting artillery fire aimed at off-shore vessels. In 1942, the initial military encampments became a more formalized cantonment (i.e., temporary or semi-permanent military quarters) with the construction of wooden structures and a water tank. Called Camp Ka`ena, the cantonment was located on the northeast side of the point in a relatively flat area inland of the railway (Figs. 18, 31, 35). At least four sets of concrete slab foundations from these buildings are still intact (Fig. 31) as is the foundation of a cylindrical, wooden water tank located upslope on the ridge (Bennett 2005: 79-80). Water was piped into the tank from the east along the OR&L easement. The cantonment supported not only detachments assigned to searchlight and gunnery positions, but housed infantrymen patrolling the beaches.

Searchlight Positions

A searchlight position was manned at Ka`ena Point between January 1942 and January 1945 by three sequentially assigned battery detachments (Bennett 2005: 93). During World War II, searchlights were primarily installed in case of night attacks by enemy aircraft. They also provided fire control data during night attacks by sea or could

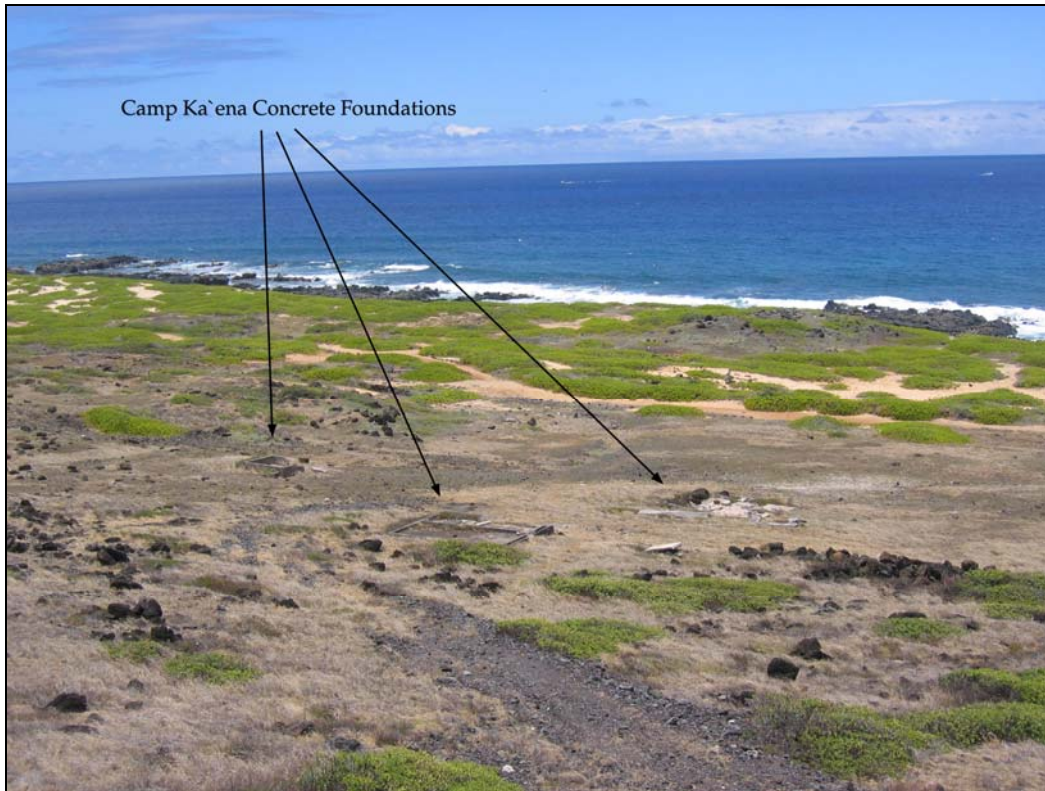


Fig. 31: Concrete Foundations for Camp Ka`ena Structures First Established in the 1920s (Facing Northwest).



Fig. 32: Sealed Entrance to BCN-409 Northern Tunnel (Facing Northeast). Note Ridge Cuts Stabilized with Pressure-Sprayed Gunite.



Fig. 33: Edge of Terraced, Cut and Fill Road Bed Stabilized with Pressure-Spray Gunite (Facing Southeast).



Fig. 34: Gunite-Coated Retaining Wall along Cut and Fill Gravel Road Beyond BCN-409 Southern Tunnel (Facing Northwest).

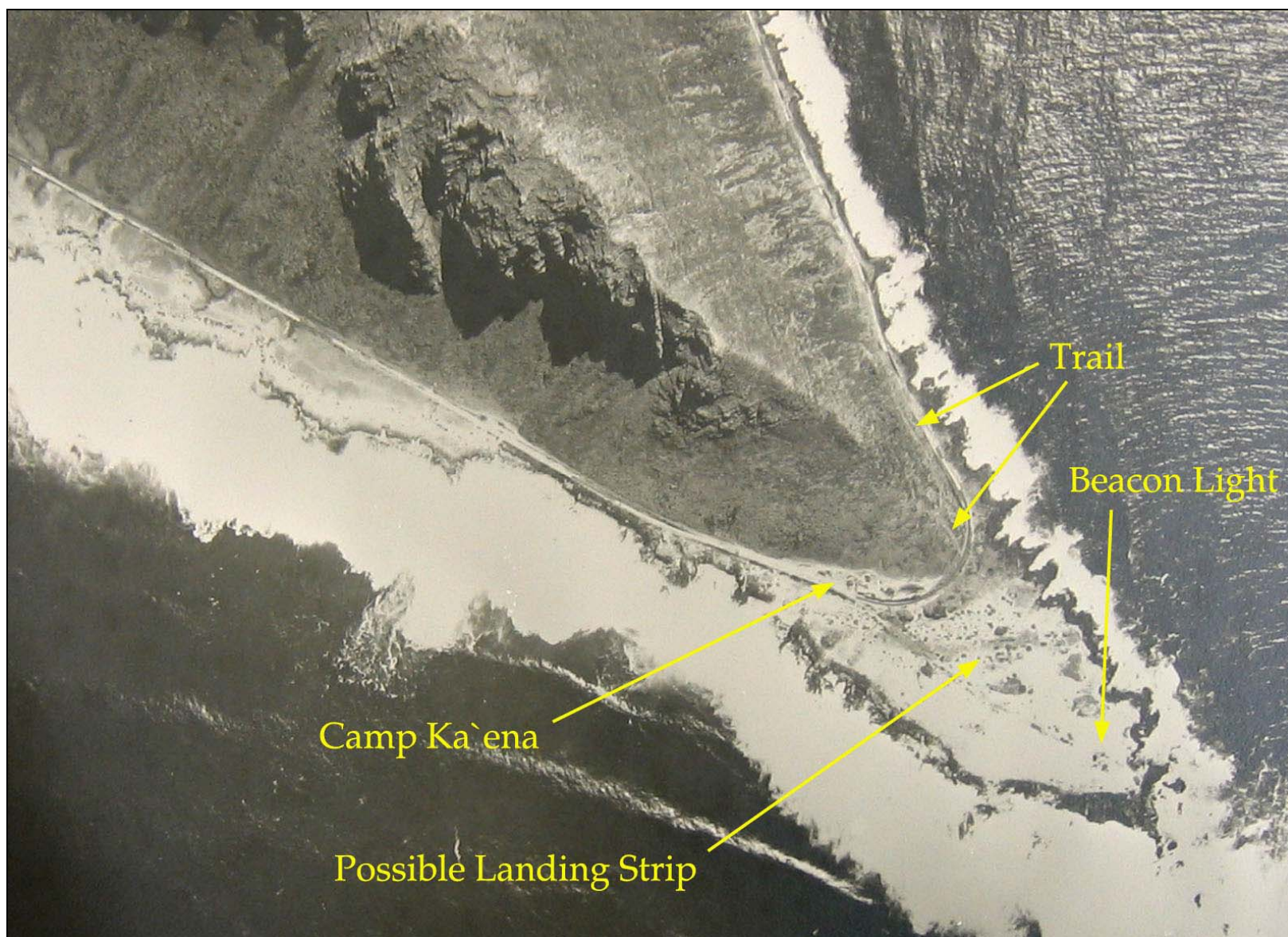


Fig. 35: Location of Possible Landing Strip, Trail, Camp Ka'ena and Beacon Light on 1939-1940 Aerial Photograph of Ka'ena Point.

artificially light areas during night battles. The positions of incoming planes or ships could be determined through triangulation when pairs of searchlights were spaced at known distances from each other. Plans were prepared in 1940 for a “Searchlight Position Trail” at Ka`ena Point, but it isn’t clear that the “Trail” was constructed as designed. The “Trail” was to be 750 feet long and 10 feet wide with two shelves (21 by 21 feet) for the mobile 60-inch, 800 million-candle power lights (Bennett 2005: 93). When in position, the searchlights were placed in concrete slabs bound by low walls.

Two ancillary buildings were also planned. One was to be “a single, story; two room reinforced-concrete controller booth” and the other a concrete shelter for the generator powering the lights (Bennett 2005: 93). The “Trail” was to be located at an elevation of 100 feet. Additional field work is needed to determine if any altered areas or remnant features matching these descriptions can be found between the railway and the BCN-409 tunnels and gravel road.

Radar Stations

A temporary radar station (SCR-268 radar set) was established at Ka`ena Point soon after the attack on Pearl Harbor. The 14 man-crew assigned to the station stayed in “a makeshift rock shelter built with a 6 by 12 inch beam as a ridge pole and corrugated iron roof paneling, covered with sand and rock” (Bennett 2005: 94). An additional hut was erected for the commanding 1st Lieutenant. Radar sets generally operated along side anti-aircraft searchlights and gunnery positions. The unit was moved to Fiji by May 1942.

By October 1942, a permanent early-warning radar station had been constructed into the ridge approximately midway between Station “S” and the future site of the BCN-409 Battery (Figs. 29 and 30). Bomb proof tunnels were constructed to house the SCR-271A fixed radar and other equipment needed to run the station (Bennett 2005: 94-100). The primary operations tunnel (15 ft wide; 10 ft high; 100 ft long) was reached by an access tunnel (6 ft wide; 6 ft high; and 50 ft long) and was ventilated by a vertical shaft (4 feet square; 50 feet high). Communications cables were run through the vertical shaft to the radar antenna placed on top of a “100-foot latticed-steel tower affixed to four large reinforced-concrete piers” (Bennett 2005: 95) and to external communications equipment. The reinforced concrete housing unit and its pyramid-shaped roof that protects the vertical shaft are still visible along the ridge line from the northeastern side of the point. Also part of the complex is a 120 square feet, reinforced-concrete structure used for the station’s communications equipment. As access to the station was difficult, a steel cableway was installed to carry materials and equipment to the site. The station was manned at least to 1949.

Battery Construction No. 49 (BCN-409)

By far the most ambitious and complex project undertaken at Ka`ena Point was construction of a battery designated “Battery Construction No. 409” (BCN-409) (Bennett 2005: 89-92). Begun in mid-1943, the facility was designed to support two 8-inch naval guns and army M1 barbette carriages. In general, these guns were intended to strengthen

coverage of coastal defense positions along the north and west shores of O`ahu. In particular, they were to defend against coastal landings and to provide additional protection for the Lualualei Ammunition Depot and Mokule`ia Airfield. BCN-409 was only 60% complete when the project was abandoned in 1945. A May 31, 1945 study of seacoast battery requirements determined that batteries of this type could not withstand attack by “modern” air or naval bombardment. Given technological advances made during World War II, the design of these batteries did not provide sufficient overhead protection for the guns and they were therefore unable to meet the needs of a seacoast defense system of the time (Bennett 2005: 91).

The design of BCN-409 called for construction of two gun emplacements; a tunnel complex excavated into the ridge at an elevation of 125 feet; a gravel access road and level work areas; and a battery commander’s station. The tunnel complex, designed to house all support operations, powder magazines, and electrical generators and compressors, was composed of two access tunnels connected internally by two traverse tunnels. All chambers were 15 feet high and 15 feet wide. The northern access tunnel was the longest at 200 feet; the southern access tunnel extended underground for 40-50 feet; and the two traverse tunnels were 75-85 and 100 feet long (Bennett 2005:89-90). The tunnel entrances were spaced 300 feet apart and were accessed by an 18 foot-wide, 2,483 foot long gravel road that approached the tunnels from the northwest (Figs. 29, 30, 32, 36 and 37).

Given the elevation of the tunnel entrances on the ridge slope, a substantial amount of cut and fill was needed to create an appropriate grade for the access road and to provide a level maneuvering area in front of the tunnel entrances (Fig. 29 and 30). This resulted in an artificial terrace being formed along much of the ridge face and a second, lower terrace just northwest of the north tunnel entrance (Fig. 33). Tailings from tunnel excavations were used as fill for the road and terrace. Some terrace segments were faced with stone retaining walls coated with gunite (Fig. 33 and 34) and gunite was pressure-sprayed over the ridge cuts at each tunnel entrance to stabilize the exposed faces and minimize rock fall (Fig. 32).

According to the plans, the two guns were to be placed on open concrete pads at an unknown distance from the tunnel entrances (Bennett 2005: 89-90). The concrete gun aprons were apparently completed before suspension of the project but construction was never started on the reinforced-concrete underground magazines needed to support each emplacement. The battery commander’s station, located “some distance above BCN-409’s tunnels,” was also not completed although the floor and walls of the station were installed (Bennett 2005: 90).

Most of the completed project components of BCN-409 are still recognizable and basically intact. The tunnel entrances have been sealed and the gunite coating on the slope cuts at the tunnel entrances is deteriorating and beginning to crumble (Bennett 2005: 100). The access road and terrace features created to provide access to the tunnels and level working areas near tunnel entrances are intact as are the piles of tailings that also form the sloping faces of the terrace (Figs. 29 and 33). Additional field inspections

would be needed to locate the concrete gun aprons for the 8-inch guns and the completed floor and walls of the battery commander's station.

Emergency Landing Strip and Other Activities

Bennett's document review of military activities at Ka`ena Point also indicates that significant portions of the point could have been altered by activities that did not leave clearly identifiable or facility specific features. This was particularly true just before and during World War II. One example is an emergency landing strip apparently staked out prior to World War II (Bennett 2005: 78). Construction was not completed but a cleared strip on 1939-1940 aerial photographs may represent these initial efforts (Fig. 35). This strip and the once clear easement to the beacon light have been obscured over time by sand and vegetation. Most of the ground disturbing activities at Ka`ena Point can probably be attributed to activities associated with camps and the routine operations of troops stationed at the point to run established defense facilities or to work on construction projects.

Beacon Light

In 1920, three years before the Ka`ena Point Military Reservation was established, the U.S. Lighthouse Service installed a beacon light at Ka`ena Point (Yent 1991a: 1). Also called a "Passing Light," the rotating beacon was placed on top of a 65-foot, reinforced concrete, white pyramidal tower that was constructed on the elevated sand knoll near the point (Yent 1991: 1; Bennett 2005: 100). It was replaced in 1990 by a new beacon placed on top of a 30-foot steel pole. The concrete tower supporting the original beacon was toppled and now lies directly north of the new beacon (Fig. 6). Being 77 years old, the toppled concrete tower is a historic property. The United States Coast Guard maintains the beacon and has jurisdiction over the one-acre parcel on which it sits (TMK: 6-9-02: 9) (Fig. 2 and 3).

Recommendations

Available information and the field inspections clearly demonstrate that there are significant historic properties within or near the proposed predator control fence and within the probable "area of potential effect" [36 CFR 800.4(a)(1)]. It was also clear during field inspections that the initially proposed fence alignment does avoid many of the identified historic properties at Ka`ena Point and could be routed to minimize its effect on other properties (Tables 2, 3 and 4). This assessment, however, can only be finalized after consultation with those individuals and organizations that may better understand the significance of these historic properties and can help determine which mitigation measures, if any, are appropriate.

The following is intended to provide guidance for determining the final fence alignment, for identifying those agencies, organizations and individuals that should be consulted, and for addressing two particularly critical steps in the federal historic preservation

Table 2: Summary of Identified Native Hawaiian Historic Properties and Project Identification and Mitigation Measures

Known Native Hawaiian Historic Properties	Known and Potential Locations	Project Identification and Mitigation Measures
Cultural Deposits or Scatters (midden, artifacts)	<u>Known:</u> Sand dunes near point <u>Possible:</u> Sand dunes and sandy soils Scattered deposits could be on rocky flats and slopes	Project avoids sandy areas Survey project area for cultural deposits or scatters Determine mitigation if found (e.g., avoid, record, data recovery)
Burials	<u>Known:</u> Sand dunes near point <u>Possible:</u> Sand dunes and sandy soils Burials in platforms and small caves on rocky slopes	Project avoids sandy areas Survey project area for platforms or caves inland Avoid if found (contingent on §6E-43, HRS)
Stone Wall Foundations	<u>Known:</u> Sand dunes near point <u>Possible:</u> Sandy areas or on rocky slopes	Survey project area for walls Determine mitigation if found
Fishing Ko`a (stone platforms)	<u>Known:</u> Rocky knoll near shoreline and inland on rocky slope <u>Possible:</u> Along shoreline or on slopes May be difficult to identify without knowledgeable individuals	Survey project area for small platforms or upright stones Avoid if found Minimize project's visual and cultural effects
Pohaku o Kaua`i (traditional cultural property)	<u>Known:</u> Partially submerged off-shore rock forming western-most point of O`ahu	Probability of property being affected by project low given distance from project area
Leina ka `Uhane (traditional cultural property)	<u>Known:</u> Limestone formation near shoreline	Near proposed fence line Avoid visual and cultural effects to extent possible

Table 3: Summary of Potential Native Hawaiian Historic Properties and Project Identification and Mitigation Measures

Potential Native Hawaiian Historic Properties	Potential Locations	Project Identification and Mitigation Measures
Fisherman Shelters and Caves	<u>Known</u> : Historic accounts (<i>See</i> house foundations; cultural deposits) <u>Possible</u> : Along shoreline or inland; particularly near canoe landings	Survey project area to identify evidence of shelters and settlements Determine mitigation if found (e.g., avoid, record, data recovery)
Canoe Landings	<u>Known</u> : Historic accounts <u>Possible</u> : Along shoreline where topography and in-shore conditions favorable	Identify potential landings by examining shoreline topography and user knowledge Avoid if definitively identified
Salt-Making Areas	<u>Known</u> : Historic accounts <u>Possible</u> : Rocky shoreline areas amenable to salt collection and drying (within range of sea spray; cluster of crevices and depressions)	Identify rocky areas suited to salt collection with knowledgeable users Avoid if definitively identified
Net Mending and Drying Areas	<u>Known</u> : Historic accounts <u>Possible</u> : Possibly flat, open areas along shoreline near canoe landings or areas suited to net fishing	Identify potentially used areas with knowledgeable fisherman Difficult to identify with certainty
Fishing Basket Locations	<u>Known</u> : Historic accounts <u>Possible</u> : Submerged areas on rocky off-shore bench suited to basket traps and <i>kala</i> and <i>hinalea</i> habitat	Identify suitable areas with knowledgeable fisherman Probably outside project area
Trails	<u>Known</u> : Historic accounts <u>Possible</u> : Routes parallel coastline along ridge slope or cross point to link desired destinations; may be obscured by subsequent uses (roads, railway, modern trails)	Survey project area to identify trail segments and associated features Probability low given subsequent uses of similar routes Determine mitigation if found
House Foundations	<u>Known</u> : 1930 account places foundations inland of railway <u>Possible</u> : Lower ridge slopes; areas subsequently modified by military use	Survey project area to identify house site remnants Probably destroyed by military use Determine mitigation if found
Heiau (Kuaokala)	<u>Known</u> : Historic documents place on knoll along high ridge overlooking Ka`ena Point; it may no longer exist	Low probability of being affected by project given distance and height above project area

Table 4: Summary of Known and Potential Post-1850 Historic Properties and Project Identification and Mitigation Measures

Associated Historic Period or Use	Known and Potential Historic Properties or Component Feature	Project Identification and Mitigation Measures
Pasturage and Ranching (1850-1940s)	<p><u>Known:</u> None; historic accounts</p> <p><u>Possible:</u> Walls, walled enclosures, corrals Fences, fence posts, fencing wire, gates</p>	<p>Survey project area for remnant ranching structures and objects</p> <p>Determine mitigation if found (e.g., avoid, record, data recovery)</p>
OR&L Railway (1897-1947)	<p><u>Known:</u> Continuous railway bed alignment and siding Raised railway bed (rock, earth or coral fill) Retaining walls (on slope cuts or fill embankments) Stone and limestone slab paving Trenched railway bed cut and tailings from excavation Ridge cut and fill formations Rock wall paralleling railway</p> <p><u>Possible:</u> Culverts Bridge foundations Railway ties or rails Shack (Meyer residence near railway)</p>	<p>Project sited to cross railway alignment where character-defining structures or modifications are absence</p> <p>Survey project area to verify absence of railway features</p>
Ka`ena Point Military Reservation (1923-1965)	<p><u>Known:</u> Fire Control Station ""S" and back end station (concrete structure; fixtures) Camp Ka`ena (concrete foundations) SCR 271 Radar Station (concrete structures; excavated tunnels) BCN-409 Battery Excavated tunnels and fixtures Tunnel entrances with gunite coating Gravel access road made of tailings and fill Terraced operations areas by tunnel entrance Tailings from tunnel excavation Bulldozed tracks and leveled areas Passing Light (beacon, concrete pyramidal tower)</p> <p><u>Possible:</u> Searchlight positions Various camp sites Miscellaneous operations sites, maneuver areas Landing strip</p>	<p>Most known historic military features are outside the proposed project area</p> <p>Project will affect BCN-409 Battery directly and indirectly</p> <p>Survey final fence alignment to determine features affected</p> <p>Document gravel access road, tailing slopes, and terraced features if crossed by the fence prior to installation</p> <p>Provide interim protection for tunnel entrances and terrace features during construction</p> <p>Minimize visual effect on BCN-409</p>

review process. Both steps are important to generate a record demonstrating compliance with Section 106 of the National Historic Preservation Act.

Recommended Fence Alignment and Mitigation Considerations

In preliminary project proposals, the preferred alignment for the predator control fence primarily follows the broad gravel road constructed between 1943 and 1945 to provide access to the BCN-409 battery tunnels (Figs. 36 and 37). This road is convenient for several reasons. It already provides a level, previously-disturbed foundation for the fence line and its position on the lower, rocky slope of the ridge avoids the sandy deposits and soils where the sea birds nest. Its relatively straight north-south alignment along the lower ridge slope would effectively cutoff most of the point for predator control purposes (Fig. 1 and 3).

In terms of historic properties, this alignment is also advantageous because much of it was highly disturbed during World War II and it avoids the sand dunes and sandy soils in which subsurface cultural deposits and burials are a higher probability. Construction and use of the road from 1943 to 1945 would have destroyed other sites or features associated with preceding periods or uses. The following historic preservation issues, however, need to be addressed if this preferred alignment, or a modified version of it, is to be used.

- Leina a ka `Uthane: The limestone formation named Leina a ka `Uthane is located near the northern end of the gravel road where the road turns east (Fig. 36). While the formation itself can be avoided, increasing the distance between the fence line and the formation will be constrained by the steep slope immediately inland (Figs. 8 and 12). The fence line will have a visual effect on this traditional cultural property and its setting and may also affect cultural beliefs and practices associated with Leina a ka `Uthane. These effects need to be considered during the review process. Another constraint is posed by the possible shrine located upslope of the formation (Feature 5, Site No. 50-80-03-1183) (Figs. 11 and 12).
- OR&L Railway Bed: The fence line needs to cross the OR&L Railway bed near the shoreline at its northern and southern extent. At both ends, sections of the railway bed were found that can be crossed without altering any of the character-defining features constructed to create the desired grade of the bed (e.g., raised railway bed, trenches, stone retaining walls) or any of the segments with paving slabs (Fig. 38). Using these identified segments would minimize the effect of the fence on the historic integrity of the railway bed and its associated features.
- Stone Wall Paralleling Railway Bed: On the southern end of the proposed alignment, the fence would need to breach a low stone wall which parallels the railway (Fig. 39). The length of the wall and its location make it impossible to avoid. The breach would, however, only remove one, relatively small section of the wall and not a segment that is particularly unique or exemplary. The wall should be mapped and photographed as a mitigation measure if breached.



Fig. 36: Gravel Road Constructed during World War II to Provide Access to BCN-409 Tunnels (Facing Northeast). Proposed fence would follow road bed. Note Leina a ka `Uthane in the background.



Fig. 37: World War II Gravel Road near Northeastern Extent of Proposed Fence (Facing Southwest). Note Leina a ka `Uthane to the left of photograph



Fig. 38: Down-Slope View of Potential Fence Alignment on Southern Shoreline (Facing Southwest). Crossing the railway at this point avoids modified railway bed.



Fig. 39: Up-slope View of Potential Fence Alignment on Southern Shoreline (Facing North). Installation would require breaching of low stone wall.

Battery BCN-409: The gravel road is itself a historic property in that it is over 50 years old and is part of the Battery BCN-409 complex which is the dominant expression of Ka`ena Point's military history. The fence, however, would not irreparably alter the integrity of this complex if installed in a manner that does not disturb the complex's significant components (e.g., the tunnel entrances, gunite-coated facings, terrace retaining walls) and does not alter the fundamental formation or foundation of the road which is made of excavated fill and tailings. Where disturbance is unavoidable, road sections or features should be documented as a form of mitigation. Ideally, the fence should be installed in a way that allows the road's general appearance to be readily restored if the fence is removed at sometime in the future.

Consultation

Regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800) require an agency (or those acting on its behalf) to consult with a number of parties concerning the potential effects of a project on historic properties.

Recommendations concerning consultation for this project are outlined below:

- Hawai'i State Historic Preservation Office (SHPO): The SHPO needs to be consulted throughout the Section 106 review process. At this stage, a letter should be sent to SHPO inviting it to comment on the project and on historic properties in the area. This summary report could be submitted with the letter as background.
- Native Hawaiian Organizations: In Hawai'i, federal agencies are required to consult with any Native Hawaiian organization that "attaches religious and cultural significance to historic properties that may be affected by an undertaking" [36 CFR 800.2(c)(2)(ii)]. As with the SHPO, a letter inviting comment or participation in the process should be sent to the Office of Hawaiian Affairs and any other appropriate native Hawaiian organization identified during the project outreach effort. This summary report could be submitted with the letter as background.
- Knowledgeable and Concerned Parties: Consultation should also occur with a range of individuals, organizations, or agencies that may have knowledge of the project area and its history. The current outreach effort being undertaken for this project provides a good opportunity to identify such parties. A record of your outreach efforts and the historic preservation issues raised during this process will help characterize the consultation effort.
- Hawaiian Railway Society: The Hawaiian Railway Society should be contacted for their expertise on the history of Hawaii's railways and any insight members may have on the function or uniqueness of features associated with the railway at Ka`ena Point.

- Coastal Defense Study Group: John Bennett, a member of the Coastal Defense Study Group and author of the article summarizing Ka`ena Point Military Reservation's history, should be contacted. His assessment of the significance or uniqueness of the remaining military features at Ka`ena Point would be invaluable. He may also know other individuals that are interested in the point's military history or have specific expertise to offer.

Inventory Survey and Memorandum of Agreement

If the project proceeds, the following two steps in the historic preservation process are of particular importance when planning the overall project. They broadly encompass many, but not all, of the technical steps needed to complete the Section 106 compliance process.

- Conduct Inventory Survey of Final Alignment: Once the final preferred alignment is determined, a historic properties inventory survey should be conducted of that alignment and all areas that will or could be disturbed during installation of the fence. This includes all ground disturbing activities needed to create the fence foundation, to install the fence, and to stage equipment and machinery. The survey should verify which historic properties will be directly affected by these construction-related actions and should provide sufficient information on these sites to evaluate their significance and propose appropriate mitigation measures (e.g., avoidance, documentation, monitoring, stabilization, etc.).
- Section 106 Memorandum of Agreement: Under the regulations that implement Section 106 (NHPA), the agency is to enter into a MOA with the State Historic Preservation Office and other parties involved in the project if that project will adversely affect significant historic properties. Other interested parties or organizations may be included as concurring parties. Such adverse effects appear to be unavoidable in this case because the most feasible route for the fence, at a minimum, runs through a historic military complex and passes near a significant traditional cultural property. Stipulations in the MOA define what steps will be taken to avoid or reduce these effects and to document those properties or features of a complex that will be altered. In this case, it is particularly important to address what measures will be taken to address the visual impact of the fence because altering the setting of a historic property or interrupting associated view plans can diminish the historic integrity of the property.

References Cited

- Alameida, Roy K. 2003. "Mo`olelo O Kawaihapai." *Hawaiian Journal of History*, 37: 33-46.
- Army Corps of Engineers, United States. 1940. Kaena Quadrangle, Island of Oahu, Territory of Hawaii. Fort Shafter, Hawaii: U.S. Army Hawaiian Department. In files of Hawai`i State Archives.
- Bath, Joyce, and Nathan Napoka. 1988. Kaena Complex (State Site No. 50-80-03-1183). National Register of Historic Places Registration Form prepared by Historic Sites Section, Department of Land and Natural Resources.
- Barrère, Dorothy B (compiler). 1994. The King's Mahele: The Awardees and their Lands. Manuscript in Hawai`i State Archives, Department of Accounting and General Services, State of Hawai`i.
- Bennett, John. D. 2005. "Kaena Point Military Reservation." *Coastal Defense Journal*, 19(2): 74-103.
- Board of Commissioners to Quiet Land Titles. 1846-1851. Native Register. In files of Hawai`i State Archives, Department of Accounting and General Services, State of Hawai`i.
- Bowser, George. 1880. *Hawaiian Kingdom Statistical and Commercial Directory and Tourrists' Guide, 1880-1881*. Honolulu: George Bowser & Co.
- Dorrance, William H. 1995. "Land Defenses of O`ahu's Forts, 1908-1920. *Hawaiian Journal of History*, 29: 147-161.
- Emerson, John S. 1854. Survey Notes for Royal Patent Grant 1665, 1804, 1805, 1806, and 1807. In files of Hawai`i State Archives, Department of Accounting and General Services, State of Hawai`i.
- Emerson, J.S. 1896. Kaena, Waialua Oahu (Register Map 1784). In collection of Land Survey Division, Department of Accounting and General Services, State of Hawai`i.
- Hammatt, Hallett H., David W. Shideler, and Douglas K. Borthwick. 1993. *Archaeological Assessment of the Proposed GTE Fiber Optic Transmission Line Alignment at Ka`ena and Kuaokala, Waialua District, and Keawa`ula, Wai`nae, O`ahu*. Report prepared for R.M. Towill, Inc
- Handy, E.S. Craighill, and Elizabeth Green Handy. 1972. *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Bernice P. Bishop Museum Bulletin No. 233.

- Ii, John Papa. 1959. *Fragment of Hawaiian History*. Trans. Mary Kawena Pukui, Ed. Dorothy B. Barrère. Honolulu: Bishop Museum Press.
- Kamakau, Samuel M. 1964. *Ka Po`e Kahiko: The People of Old*. Trans. Mary Kawena Pukui, Ed. Dorothy B. Barrère. Bernice P. Bishop Museum Special Publication No. 51. Honolulu: Bishop Museum Press.
- Kamakau, Samuel M. 1976. *The Works of the People of Old: Na Hana a ka Po`e Kahiko*. Trans. Mary Kawena Pukui, Ed. Dorothy B. Barrère. Bernice P. Bishop Museum Special Publication No. 61.
- McAllister, J. Gilbert. 1933. *Archaeology of Oahu*. Bernice P. Bishop Museum Bulletin No. 104.
- McGrath, Edward J., Kenneth M. Brewer, and Robert Krauss. 1973. *Historic Waianae, a "Place of Kings."* Honolulu: Island Heritage.
- Moffat, Riley M. and Gary L. Fitzpatrick. 1995. "Surveying the Mahele: Mapping the Hawaiian Land Revolution." In *Palapala`aina*, Riley M. Moffat and Gary L. Fitzpatrick, Vol. 2. Honolulu: Editions Limited.
- Sahlins, Marshall. 1992. "Historical Ethnology." In *Anahulu: The Anthropology of History in the Kingdom of Hawaii*, Patrick V. Kirch and Marshall Sahlins, Vol. 1. Chicago: University of Chicago Press.
- Sterling, Elspeth, and Catherine C. Summers. 1978. *Sites of Oahu*. Honolulu: Department of Anthropology and Department of Education, Bernice P. Bishop Museum.
- Thompson, Erwin N. 1980. *Pacific Ocean Engineers: History of the U.S. Army Corps of Engineers in the Pacific, 1905-1980*. Published by the U.S. Army Corps of Engineers.
- United States Geological Survey. 1929. Kaena Quadrangle. Washington D.C.: U.S. Geological Survey. In files of Hawai`i State Archives, Department of Accounting and General Services, State of Hawai`i
- Yent, Martha. 1991(a). *Archaeological Investigations at Kaena Point (State Site No. 50-80-03-1183), Kaena, Waialua & Waianae, Oahu*. Report prepared for and by the Division of State Parks, Department of Land and Natural Resources.
- Yent, Martha. 1991(b). *Archaeological Inventory Survey: Keawula, Kaena Point State Park, Waianae, Oahu, State Site No. 50-80-03-2805*. Report prepared for and by the Division of State Parks, Department of Land and Natural Resources.

APPENDIX D

Brochure: Ka'ena Point Natural Area Reserve Ecosystem Restoration Project

How can I help?

There are a number of ways you can help:

- Keep pets at home when visiting the reserve
- Stay on the trail
- Keep motorized vehicles out of the reserve
- Pack all trash out
- Respect cultural sites
- Volunteer on service projects for trail maintenance and weed pulling
- Give us your input and ideas about a predator-proof fence to kaenapoint@yahoo.com



Black-footed Albatross and Red-tailed Tropicbirds are two species that could return to Ka`ena



For more information on this project please e-mail:
kaenapoint@yahoo.com

Or Write:

DLNR Natural Area Reserves System
1151 Punchbowl St
Honolulu, HI, 96813

Cover Drawing: Naomi Swenson

Photo Credits: Lindsay Young, Eric VanderWerf, Norine Yeung, Pat Aldrich, Xcluder Pest Proof Fence company and Google Earth.

KA`ENA POINT Natural Area Reserve Ecosystem Restoration Project



DIVISION OF FORESTRY AND WILDLIFE
1151 Punchbowl Street, Room 325
Honolulu, Hawaii 96813
Phone : (808) 587-0166 | Fax : (808) 587-0160



U.S. Fish and Wildlife Service
Pacific Islands Field Office
Honolulu, Hawai`i



THE WILDLIFE SOCIETY
HAWAII CHAPTER



Forever Ka`ena

Ka`ena Point is located at the very northwest tip of the island of O`ahu. It is about 10 miles west of Waialua on the North Shore and 10 miles north of Wai`anae on the leeward coast. Within this area is the 59-acre Ka`ena Point Natural Area Reserve, owned and managed by the Hawai`i Department of Land and Natural Resources.



Ka`ena Point Natural Area Reserve as seen from above

Island of O`ahu, Hawai`i



A cultural resource

People have been a part of Ka`ena Point for generations. Many trace their ancestors to this special place. Within the reserve is Ieina a ka`uhane (Spirit Leap), which is considered to be a wahi pana, a celebrated legendary place. Early Hawaiians used Ka`ena Point for fishing and feather collecting. Today, people of various cultures visit Ka`ena Point for fishing, hiking, bicycling, and other recreational and educational activities.



The wildlife of Ka`ena

Ka`ena Point is an excellent example of the type of ecosystem that can be found in Northwestern Hawaiian Islands. The difference is that anyone on O`ahu can drive to Ka`ena Point to see this spectacular display of plants and animals.



- It is home to nesting seabirds, monk seals, and other native coastal species.
- One of the largest seabird colonies in the eight main Hawaiian Islands is found here. Recent surveys have estimated approximately 2,000 seabirds use Ka`ena Point as their breeding grounds, and many more than that use the area as a place of refuge.
- With adequate protection, it has the potential to become a safe haven for many more species of Hawai`i's seabirds, plants, and insects that cannot survive elsewhere.



Threats to wildlife at Ka`ena

What is threatening the wildlife at Ka`ena?

Rats and Mice: Observations from Hawai`i and around the world have shown that rats will eat sea-bird eggs and chicks, and even attack adult birds. Scientists estimate that rats have caused 40-60% of all bird and reptile extinctions on islands world-wide. Rats and mice also eat native plants and seeds.



Sandalwood seeds eaten by Rodents at Ka`ena Point



Shearwater chick killed by rats

Mongoose, Cats, and Dogs: At Ka`ena Point in 2006 15% of Wedge-Tailed Shearwater chicks were killed by these predators, and in 2007 13% of Laysan Albatross chicks were also killed. These birds nest on the ground and are extremely vulnerable, especially if they cannot yet fly.



Over 100 Wedge-tailed Shearwaters killed by dogs and cats in 2006 at Ka`ena Point

Despite intensive efforts to control predators such as rats, mice, mongoose and others they continue to threaten nesting seabird populations. Without our help, seabird and native plant communities at Ka`ena Point will continue to be attacked by these alien predators.

Plants and Animals of Ka`ena

Nesting seabird species:

Laysan Albatross (Moli)
Wedge-Tailed Shearwater (`Ua `u kani)
White Tailed Tropicbird (Koa`e `ula)
Hawaiian Short-eared Owl (Pueo)



Other seabirds observed:

Black-footed Albatross
Great Frigatebird (`Iwa)
Red-footed, Brown and Masked Boobies (`A)
Red-tailed Tropicbird (Koa `e `ula)
Grey-backed (Pakalakala), Sooty (`Ewa `ewa) and White Terns (Manu-o-kū)
Black Noddy (Noio)



Migratory shorebirds:

Wandering Tattler (`Ulili)
Ruddy Turnstone (`Akekeke)
Pacific Golden Plover (Kōlea)

Other animals:

Hawaiian Monk Seal
(`Ilio holo kiauaua)



Native Plants:

Many coastal plants such as naupaka, `ilima & naio
Eleven federally endangered species such as `ohai and `akoko (a species found only at Ka`ena Point)

Is there a solution to predation?

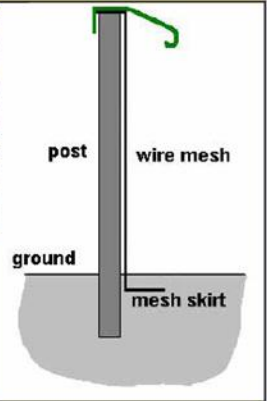
Ecosystem restoration through fencing

The goal of ecosystem restoration is to provide a safe place for Hawai`i's native seabirds, plants, and insects by removing destructive alien species and allowing the native species to rebound. New technology in pest-proof fencing holds promise. A pest proof fence could effectively keep out all kinds of mammalian pests- from large animals such as pigs and dogs, to small animals such as mongoose and rats.

A fence with a combination of features- built approximately 6.5 feet high with a rolled hood at the top, fine mesh between the fence posts, and a skirt buried underground -- prevents animals from jumping, climbing, squeezing through or digging their way around the fence and into the protected area. This type of pest proof fence was developed in New Zealand and has been used very successfully.



An example of a pest proof fence in New Zealand



If this method were used, there would be two steps: first fence construction followed by predator removal. Compared to the current cost of protecting native seabirds and plants from alien species at Ka`ena Point, a fence would start to save money by eliminating the need to constantly remove alien species.

If constructed, this will be the first pest proof fence not only in Hawai`i, but in the United States. It would be a great example of the people of Hawai`i showing leadership in protecting and restoring their unique natural resources.

How could the project affect me?

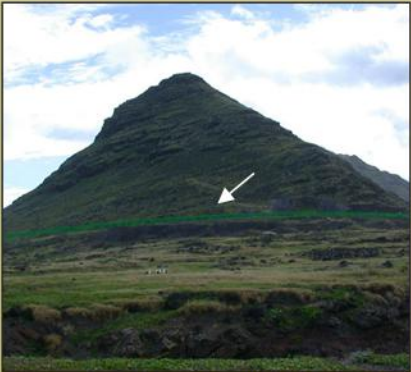
How would a fence affect

Access?

People would still be allowed to visit the reserve both during and after construction. There would be unlocked gates that would allow people on foot and on mountain bikes to enter the reserve at the existing entrances on both the North Shore and West side.

Views?

The fence would run along the base of the Wai`anae Mountains following the existing upper roadbed. It would come down to the high tide line at either end where the existing entrances to the Natural Area Reserve are, but will not fully encircle the reserve. The fence would be designed to blend into the hillside.



What a pest proof fence may look like at Ka`ena

The future of Ka`ena Point?

By removing alien species from Ka`ena Point, two main things would happen.

- existing populations of seabirds and native plants would increase.
- species that could use the Ka`ena Point ecosystem, but were unable to when predators were present, would start to return, or would be transplanted there.

As a result, larger populations, and more types of plants and wildlife would be found within the reserve. By removing alien species from Ka`ena Point we have the opportunity to restore this rare ecosystem to its natural state and preserve a precious piece of Hawai`i for future generations.

APPENDIX E

Comments Received During Pre-Consultation

Pre-consultation for this project began with the formation of an outreach team. The outreach team gave presentations to community organizations and met with individuals connected to the Ka'ena Point area (both the Mokulē'ia and Wai'anae sides), including the North Shore Neighborhood Board, the Wai'anae Neighborhood Board, and the Mokulē'ia Community Association. The outreach team also conducted user surveys at Ka'ena Point on three weekends during the fall of 2007, to get input from actual users of Ka'ena Point about why they visit Ka'ena and what they think about the proposed fencing. Finally, the outreach team prepared a brochure and poster display for the Hawai'i Conservation Conference and other similar events. A unique email account was established for the project, kaenapoint@yahoo.com, to create an easy-to-remember way for the public to communicate their thoughts about the project. In conjunction with the community outreach, the Department sent a scoping letter to over 90 government agencies, organizations, and individuals that were identified as potential stakeholders for the project. Follow-up meetings occurred with regulatory agencies to discuss permitting requirements. During the pre-consultation period, written comments were received from the following:

- NOAA
- U.S. Army Environmental staff
- U.S. Coast Guard
- Office of Hawaiian Affairs
- City and County of Honolulu Department of Planning and Permitting
- Councilmember Donovan Dela Cruz
- American Bird Conservancy
- Historic Hawaii Foundation
- Mokulē'ia Community Association
- North Shore Neighborhood Board
- Michele Bachman
- John Bennett
- David Bremer
- Randy Ching
- Rich Greenamyre
- Tom Lenchanko
- Keona Mark
- Reed Matsuura
- Cynthia Rezentes
- Steve Rohrmayr



Jennifer Metz
<Jennifer.Metz@noaa.gov>
11/05/2007 08:57 AM

To Christen.W.Mitchell@hawaii.gov
cc
bcc
Subject comment for Kaena EA

History:

☞ This message has been replied to.

Aloha Christian,
I passed the EA to one of my colleagues, David Schofield, who is our Marine Mammal Strandings Coordinator. He does a lot of work with the Hawaiian monk seal. Please view his comment below regarding the monk seal in the draft EA. Thank you.

Aloha Jen,

I am happy with the mention of the Hawaiian monk seal in this document. It adequately notes the importance of the habitat to the monk seal and mentioning the 2006 pupping event is very appropriate.

It is a sound document but one suggestion might be to add that the monk seal would benefit from the predator fence not just to prevent disturbance but also to prevent disease transfer. The recently published Hawaiian Monk Seal Recovery Plan states as one of the threats the the survival of this species is disease transfer. Specifically diseases caused by morbilli virus (distemper), toxoplasmosis, and leptospirosis are of high concern and can be shed by some of the named predators the project is working to eradicate.

Thanks for letting me review and I look forward to having the opportunity to further the partnership to raise awareness of monk seal issues at Kaena Pt.

Mahalo,
David

--

Jen Metz
Outreach and Education Specialist
Protected Resources Division
NOAA Fisheries, Pacific Islands Regional Office
1601 Kapiolani Blvd., Suite 1110
Honolulu, HI 96814-0047
Tel # (808) 944-2268



"Kawelo, Kapua H Ms CIV
USA USARPAC"
<kapua.kawelo@us.army.mil
>

11/06/2007 04:46 PM

To <Christen.W.Mitchell@hawaii.gov>

cc "Ching, Susan N Ms CTR USA USARPAC"
<susan.ching@us.army.mil>, "Mansker, Michelle L Mrs CIV
USA USARPAC" <michelle.mansker@us.army.mil>

bcc

Subject Kaena Point Predator Fence Comments (UNCLASSIFIED)

Classification: **UNCLASSIFIED**

Caveats: NONE

Aloha Christen,

Got your flier about Kaena. We have been in the loop on some of this but felt we should formally convey our concern/support/interest in participating.

We are excited about this fence because it will be the first real test of this technology to protect a natural area in Hawaii. As you may know, Island Conservation is developing implementation plans for some predator fencing on DOD lands in Hawaii. Two sites of ours are included in possible pilot project sites. We are interested in what you learn and in learning from you.

Our major concern is the *Chamaesyce celastroides* var. *kaena* which will not be included in the fence. We have not observed rat damage to plants in the past at Kaena or at any other wild population sites where we work with this taxon. We are concerned that the fence may concentrate rats on the outside where the *C. celastroides* are and they may incur damage due to local rat number increases.

We are interested in any monitoring that is planned in conjunction with this project and since we work regularly at the *C. celastroides* would love to be involved in reviewing plans and in site visits for this aspect of the project.

Thank you for the opportunity to comment. Good luck with the project.

Mahalo Kapua

H. Kapua Kawelo

Biologist, Environmental Division

Directorate of Public Works, USAG-HI

Phone: (808) 656-7641

Fax: (808) 656-7471

Service is our Job! Excellence is our Goal!

Your comments are important to us. Logon to <http://ice.disa.mil/index.cfm?fa=card&service_provider_id=89247&site_id=48&service_category_id=1>

Classification: **UNCLASSIFIED**

Caveats: NONE



"Shepardson, Dale LCDR"
<Dale.V.Shepardson@uscg.mil>

Sent by:
Dale.V.Shepardson@uscg.mil

To <christen.w.mitchell@hawaii.gov>

cc

bcc

Subject FW: Ka'ena Point EA

10/02/2007 06:49 AM

Good Morning: We received your letter last week regarding "Pre-consultation on Environmental Assessment for Predator-Proof Fencing at Ka'ena Point Natural Area Reserve ..." The Coast Guard maintains a light on the Point that we will need to access in order to service the light. Will the location of the fence restrict access to the light and if so may we ask that the gate be large enough to allow access to the light? Thank you.

LCDR Dale Shepardson
Chief, D14 Waterways Management
(808) 541-2320



-----Original Message-----

From: Garrett, David BMC
Sent: Tuesday, October 02, 2007 6:28 AM
To: Shepardson, Dale LCDR
Subject: RE: Ka'ena Point

Sir,

This will not be a problem as long as we have access when ever we need it, and we can put one of our locks on it. We do a chain, lock to lock setup with other agencies on other light as well.

Thanks,

BMC Dave Garrett
Officer in Charge
Aids to Navigation Team
400 Sand Island Access Road
Honolulu, Hawaii 96819
(808) 842-2851

-----Original Message-----

From: Shepardson, Dale LCDR
Sent: Monday, October 01, 2007 4:21 PM
To: Garrett, David BMC
Subject: Ka'ena Point

Chief: The state wants to put up a fence at the Ka'ena Point Natural Area Reserve. The fence would run from the washout on the Wai'anae side to the boulder barricade. The fence would be 6.5 feet tall. Is that going to interfere with your ability to get out there?

LCDR Dale Shepardson
Chief, D14 Waterways Management
(808) 541-2320

PHONE (808) 594-1888

RECEIVED

FAX (808) 594-1865

'07 OCT -3 A10 :46



FORESTRY & WILDLIFE
STATE OF HAWAII

STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD07/3231

September 28, 2007

Christen Mitchell, Planner
Division of Forestry and Wildlife
State Department of Land and Natural Resources
1151 Punchbowl St. Rm. 325
Honolulu, HI 96813

RE: Pre-Consultation on Environmental Assessment for Predator-Proof Fencing at Ka'ena Point Natural Area Reserve and Ka'ena Point State Park, O'ahu, TMKs: 6-9-02: 4, 9, 13, 14; 8-1-01: 22.

Dear Christen Mitchell,

The Office of Hawaiian Affairs (OHA) is in receipt of your September 20, 2007, request for comments on the above proposed project, which calls for the erecting of a two-meter fence that will prevent predators from entering into the Natural Area Reserve. OHA offers the following comments.

OHA appreciates that the project will protect the populations of area seabirds and enhance the regeneration of native plants. OHA also appreciates that human access to the reserve will not be changed due to the fence. We do, however, request the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the fence, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at sterlingw@oha.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o".

Clyde W. Nāmu'o
Administrator



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD07/3231 B

November 2, 2007

Christen Mitchell, Planner
Division of Forestry and Wildlife
State Department of Land and Natural Resources
1151 Punchbowl St. Rm. 325
Honolulu, HI 96813

RE: Pre-Consultation on Environmental Assessment for Predator-Proof Fencing at Ka'ena Point Natural Area Reserve and Ka'ena Point State Park, O'ahu, TMKs: 6-9-02: 4, 9, 13, 14; 8-1-01: 22.

Dear Christen Mitchell,

On September 28, 2007, the Office of Hawaiian Affairs (OHA) sent a letter containing our comments on the above proposed project, which calls for the erecting of a two-meter fence that will prevent predators from entering into the Natural Area Reserve. After further consulting with our beneficiaries, we would like to submit additional comments on the project.

OHA requests that the path for the fence be positioned in such a way that excludes the Leina-a-ka-'uhane from the fenced-off area. Members of the Hawaiian community have concerns that including the leina in the fenced area would disturb the spiritual atmosphere surrounding the sacred site.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at sterlingw@oha.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o".

Clyde W. Nāmu'o
Administrator

Christen Mitchell
Planner
November 2, 2007
Page 2

C: William Ailā Jr.
86-630 Lualualei Homestead Road
Wai'anāe, HI 96792

NOV 27 2007

PHONE (808) 594-1888

FAX (808) 594-1865



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD07/3231C

November 20, 2007

Chris Swenson
Craig Rowland
U.S. Department of the Interior
Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Blvd., Rm. 3-122
Box 50088
Honolulu, HI. 96850

RE: Initiating consultation for predator-proof fence at the Ka'ena Point Natural Area Reserve and Ka'ena Point State Park, O'ahu, TMKs: 6-9-02: 4, 9, 13, 14 and 8-1-01:22.

Dear Chris Swenson and Craig Rowland,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced request for comments on a project that calls for the installation of a two-meter high fence that will prevent predators from entering into the Natural Area Reserve. OHA appreciates the opportunity to provide input into the project and offers the following comments.

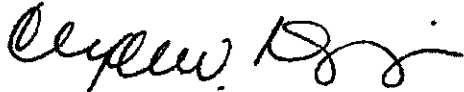
The fence alignment that OHA favors is "Option 2," which is positioned in such a way that excludes the Leina-a-ka-'uhane from the fenced-off area. Members of the Hawaiian community have concerns that including the leina in the fenced area would disturb the spiritual atmosphere surrounding the sacred site.

OHA appreciates that the project will protect the populations of area seabirds and enhance the regeneration of native plants. OHA also appreciates that human access to the reserve will not be changed due to the fence. In addition, we will rely on the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the fence, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Chris Swenson and Craig Rowland
U.S. Department of the Interior
November 20, 2007
Page 2

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at sterlingw@oha.org.

Sincerely,



Clyde W. Nāmu'o
Administrator

C: William Ailā Jr.
86-630 Lualualei Homestead Road
Wai'anae, HI 96792

✓ Pauline Sato
The Nature Conservancy of Hawai'i
923 Nu'uuanu Avenue
Honolulu, HI 96817

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

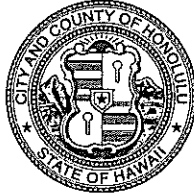
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 527-6743
INTERNET: www.honolulu.gov • DEPT. WEB SITE: www.honolulu.dpp.org

RECEIVED

'07 SEP 27 P1:26

MUFI HANNEMANN
MAYOR

FORESTRY & WILDLIFE
STATE OF HAWAII



HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUÉ
DEPUTY DIRECTOR

2007/ELOG-2693(AM)

September 26, 2007

Ms. Christen Mitchell
Division of Forestry and Wildlife
Department of Land and Natural Resources
1151 Punchbowl Street, Room 325
Honolulu, Hawaii 96813

Dear Ms. Mitchell:

Subject: Pre-Assessment Consultation
Predator-Proof Fencing
Kaena Point Natural Area Reserve and Kaena Point State Park
Tax Map Keys: 6-9-2: 4, 9, 13, 14; 8-1-1: 22

This responds to your request, received September 20, 2007, for comments on the state's proposal to install a 6.5-foot-high "predator-proof" fence at Kaena Point Natural Area Reserve and Kaena Point State Park. We have the following comments.

The project site is located in the Special Management Area (SMA). The proposed fence constitutes "development," as defined by the Revised Ordinances of Honolulu Chapter 25 (the "SMA Ordinance"). Hence, it requires approval of a SMA Use Permit. If the project's valuation is less than \$125,000, then it may qualify for an SMA minor permit, which is administratively processed by our department. However, if its valuation exceeds \$125,000, then a SMA major permit will be necessary. SMA major permits require the processing of an environmental assessment in accordance with the procedural steps set forth in HRS Chapter 343; involve public hearings; and, are granted by the City Council.

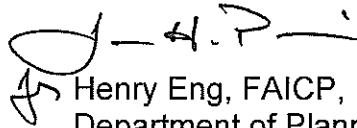
It appears from the attached rendering that the fence is located near the shoreline. In order for us to determine whether the project will be subject to city's shoreline regulations, enumerated in ROH Chapter 23 ("Shoreline Setbacks"), a drawing depicting the fence type and its location relative to the shoreline will be required. If any part of the fence will be located within 55 feet of the shoreline, then a current certified shoreline survey will also be needed.

Ms. Christen Mitchell
September 26, 2007
Page 2

We note that the proposed fence will be located in the State Land Use Conservation District; therefore, the proposed fence is not subject to the city's Land Use Ordinance.

We would like an opportunity to review the Draft Environmental Assessment when it is circulated for comments. If you have any questions, please contact Ann Matsumura of our staff at 768-8020.

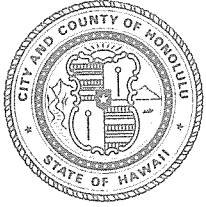
Very truly yours,

A handwritten signature in black ink, appearing to read "H. Eng", with a stylized flourish at the end.

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:cs

doc569385



CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813-3065 TELEPHONE 547-7000

'07 OCT 11 AM 11:18

FORESTRY & WILDLIFE
STATE OF HAWAII

DONOVAN M. DELA CRUZ
COUNCILMEMBER, DISTRICT 2
CHAIR, COMMITTEE ON PUBLIC HEALTH,
SAFETY AND WELFARE
TELEPHONE: (808) 547-7002
FAX: (808) 527-5737
EMAIL: dmdelacruz@honolulu.gov

October 8, 2007

Department of Land and Natural Resources
Department of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, HI 96813
Attn: Christen Mitchell, DOFAW Planner

Dear Ms. Mitchell:

RE: Predator-Proof Fencing at Kaena Point Natural Area Reserve & Kaena Point

This pristine area is the last remaining undeveloped area on Oahu and protecting the fauna and wildlife is a necessity. Already too many of Kaena Point's wildlife and plants have been affected by human encroachment, especially by motorized dirt bikes and atv's.

As development brings people and their pets closer to this area, this fence will serve to keep these domestic predators out. The world is losing many of its species of birds and plants everyday and this is mainly caused by the lack of futuristic planning.

I support the installation of this predator-proof fencing and the protection of this important Hawaiian cultural site.

Mahalo for bringing this issue and solution forward and thank you for this opportunity to testify.

Sincerely,

A handwritten signature in black ink, appearing to read "Donovan M. Dela Cruz", is written over a large, stylized, handwritten "X" or similar mark.

Donovan M. Dela Cruz
Councilmember
District II

DMD: rhm
(kaena pt. testimony)



RECEIVED
AMERICAN BIRD CONSERVANCY
CONSERVING WILD BIRDS AND THEIR HABITATS THROUGHOUT THE AMERICAS

FORESTRY & WILDLIFE
STATE OF HAWAII

Christen Mitchell
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl St
Room 325
Honolulu, HI 96813

October 5, 2007

Dear Ms. Mitchell;

We were pleased to learn of the Predator-Proof Fencing project for Ka'ena Point Natural Area Reserve and Ka'ena Point State Park, O'ahu, and look forward to supporting the project in any way we can. The American Bird Conservancy is the only 501(c)(3) organization that works solely to conserve native wild birds and their habitats throughout the Americas. ABC acts to safeguard the rarest bird species, using the best science available to determine the highest priorities and the best solutions. Protecting seabird nesting habitat from predators is clearly one of the highest priorities to ensure the long term stability of seabird populations and offers one of the most efficient opportunities to have a positive impact.

Throughout the world, non-native animals pose a grave threat to seabird nesting grounds and sometimes even the viability of entire seabird populations. We have followed the successful fencing and eradication projects in New Zealand with interest and continue to encourage a wider use of these methods to protect seabirds. We anticipate a measurable improvement in nest success as a result of the fencing and look forward to seeing the plans for your evaluation of the action. Such demonstrable results are of value to future project development and in compiling best practices and lessons learned.

If you have any questions, please feel free to contact Jessica Hardesty, Seabird Program Director at American Bird Conservancy (jhardesty@abcbirds.org).

Thank you for this opportunity to comment.

Sincerely,

Jessica Hardesty
Seabird Program Director

HISTORIC HAWAII FOUNDATION

RECEIVED

'07 OCT 15 A11 :23

October 12, 2007

FORESTRY & WILDLIFE
STATE OF HAWAII

Christen W. Mitchell
Planner, Department of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street, Room 325
Honolulu, HI 96813

**RE: Pre-Consultation on Environmental Assessment for Predator-Proof Fencing at
Ka'ena Point Natual Area Reserve and Ka'ena Point State Park, O'ahu**

Dear Ms. Mitchell:

Thank you for including Historic Hawai'i Foundation in the consultation process for the proposal to install Predator-Proof Fencing at Ka'ena Point Natual Area Reserve and Ka'ena Point State Park on O'ahu.

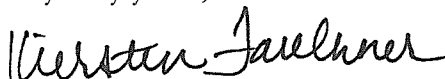
Since 1974, Historic Hawai'i Foundation (HHF) has been the statewide leader for historic preservation. HHF's mission is to preserve and encourage the preservation of Hawai'i's historic buildings, places, objects and communities.

Historic Hawai'i Foundation supports your efforts to protect the flora and fauna of Ka'ena Point by excluding predators that impact seabird colonies and other native species. We look forward to reviewing the Environmental Assessment.

In general, we will are concerned about impacts to historic and cultural sites, both in the finished condition and during construction. Appropriate avoidance, minimization and mitigation actions should be considered in the EA. We are also concerned with potential visual impacts from the two-meter fence and would like to see schematic design and photo simulations of the fence from various viewpoints.

Please let me know if you have any questions. I can be reached at 523-2900 or via email to Kiersten@historichawaii.org.

Very truly yours,



Kiersten Faulkner, AICP
Executive Director



MOKULE'IA COMMUNITY ASSOCIATION

68-703 Crozier Drive
Waialua, HI 96791

RECEIVED

'07 NOV -8 November 7, 2007

Laura H. Thielen
Director
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

FORESTRY & WILDLIFE
STATE OF HAWAII

Aloha Director Thielen,

Best congratulations on your confirmation as Director. That's great news!

At its October 20, 2007 meeting, the Mokule'ia Community Association (MCA) received a presentation on the Ecosystem Restoration Project for the Ka'ena Point Natural Area Reserve (NAR). The project proposes to erect pest-proof fencing to prevent alien feral predators, as well as loose non-feral animals, from entering the NAR and killing its native fauna and flora, particularly its albatross and shearwaters, but also other seabirds, migratory shorebirds, monk seals and native plants.

The rust-proof, fine-meshed, hooded fencing, with a buried skirt was developed in New Zealand and has proven successful in its use there.

After numerous questions and discussion of the project and its benefits, the Mokule'ia Community Association expressed strong support for the project and recommends your and DLNR's support for the initiative.

Sincerely,



Michael Dailey
President

Copies to:
Governor Linda Lingle
Senator Bobby Bunda
Representative Michael Magaoay
Christen Mitchell, DOFAW Planner
North Shore Neighborhood Board No. 27
Hawai'i Chapter, The Wildlife Society

North Shore Neighborhood Board No. 27
P. O. Box 577
Haleiwa, Hawaii 96712
November 12, 2007

Laura H. Thielen, Chairperson
DLNR Natural Area Reserves System
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Chairperson Thielen,

At the October 23, 2007 North Shore Neighborhood Board No. 27 Meeting, Lindsay Young and Ati Jeffers (DLNR Natural Reserves System) made a presentation on Ka'ena Point Natural Area Reserve Ecosystem Restoration Project – restoration through fencing. They provided Board members with brochures that were very explicit in delineating the threats to the wildlife at Ka'ena, the solution to the predation, the affect the fencing will have on the community and the community's responsibility to take care of the "aina." It is imperative that this natural area reserve be a safe haven for Hawaii's native plants, seabirds and animals.

Ms. Young and Mr. Jeffers asked the North Shore Neighborhood Board No. 27 for their support of the project, a request that was unanimously affirmed. The Board members were also informed that public comments were welcome and contact information was provided.

Sincerely,

A handwritten signature in cursive script that reads "Geraldine 'Gerry' Meade".

Geraldine "Gerry" Meade, Secretary
(808) 638-8386

From: MicheleB (bachmanm001@hawaii.rr.com)
To: kaenapoint@yahoo.com
Date: Tuesday, October 23, 2007 3:52:09 PM
Subject: Can I help?

While visitning Kaena point this weekend I met some of your representatives and recieved an educational broucheur. I have lived near to, and visited this area many times. I think what is happening out there is GREAT!. What a difference after being nearly run out by the weekend ATV.group, and the often present "scary" coalition I am excited by what you are doing. I think the fence looks like a great idea, too bad we need it, but we do.

I would also like to help if I can. I work Saturday and SUnDay, but may have other ways of helping. I can type, file, phone, design, mail...let me know how I can get involved. We need to protect Kaena Point as well as many of our other open space.

Michele Bachman
bachmanm001@hawaii.rr.com

RECEIVED

'07 SEP 25 A11 :33

FORESTRY & WILDLIFE
STATE OF HAWAII

John D. Bennett
45-340 Mokulele Dr.
Kaneohe, HI 96744-2245
E-Mail: bennettj009@hawaiiantel.net

September 23, 2007

Christen W. Mitchell
Dept. of Land & Natural Resources,
Div. of Forestry & Wildlife
1151 Punchbowl St., Rm. 325
Honolulu, HI 96813

Re: Kaena Point Natural Area Reserve, proposed predator-proof fence

Dear Christen:

My interest in the Kaena Point Natural Reserve is chiefly in its recent military history, and I am mainly concerned with preservation of the extant structures that are found on the slopes of Puu Pueo that were used in conjunction with Oahu's coast artillery, and the early warning radar station built during World War Two.

As a historian and preservationist, I feel that a predator-proof fence would greatly assist in preserving the albatross colonies from wild dogs, cats, and the mongoose. Man is one of the greatest hazards to native plants by stepping on them and running them over with mountain bicycles.

Having well-defined trails in the preserve would greatly assist in preserving the nesting birds and native plants, however, the remoteness of the area precludes having a ranger or other enforcement type of officer present at all times.

Sincerely Yours,


John D. Bennett

[Print](#) - [Close Window](#)

From: "Bremer" <bremerd001@hawaii.rr.com>
To: kaenapoint@yahoo.com
CC: greenamyr001@hawaii.rr.com
Subject: Kaena Point restoration
Date: Fri, 5 Oct 2007 08:35:35 -1000

Ati Jeffers-Fabro
Outreach Coordinator
Kaena Point Ecosystem Restoration Project

Hello,

Along with Rich Greenamyer, who recently wrote to you in support of your efforts to control predators at Kaena Point, I also enjoy mountain biking with Rich around Kaena Pt every month or so. We appreciate the signs and marking of the paths to assist bikers in staying on the trail and off the fragile plants and dunes. Perhaps we could assist in monitoring if we knew how to report dog owners who walk dogs unleashed in the area or cyclists who may stray off the marked trails. We usually try to remind such individuals of the need to protect the area, and it may be difficult to do more than that since DLNR obviously lacks resources to regularly patrol such a remote location. But let us know if you have any suggestions or would like us to report on any violations we might observe.

We would also support any efforts to further restrict motor vehicles from entering beyond the parking lot on the Mokuleia side. We've noticed recent increased erosion and denuding of the dunes that appears to be the result of 4-wheel drive trucks using the area for recreational racing or mud wallowing. That's another very difficult activity to prevent, and there may be legitimate access needs of fisherman who travel in to reach shoreline fishing spots. My impression is that the fisherman tend not to be the source of major abuse of the ecosystem, though some may tend to leave rubbish on the beaches.

Also if there is anyway to construct a pedestrian bridge across the washed out trail on the Waianae side of point, that would enhance legitimate recreational access to the point. I think it's important to keep the region open to responsible users to maintain public awareness of and support for your conservation efforts.

We very much appreciate your work in protecting and restoring the area. It's nice to see the native plants and seabirds thriving beyond the gated area.

Aloha,

David Bremer



randy ching
<oahurandy@yahoo.com>

09/25/2007 10:36 AM

To christen.w.mitchell@hawaii.gov

cc

bcc

Subject Kaena Pt fence project

Aloha Christen. Pauline Sato of The Nature Conservancy gave the Sierra Club, Oahu Group a presentation on the project. It looks great! I hope it happens soon. If you need volunteers to help with the project, the Oahu Group would be willing. Let me know.

Randy Ching
Sierra Club, Oahu Group chair

Boardwalk for \$500? In 2007? Ha! Play Monopoly Here and Now (it's updated for today's economy) at Yahoo! Games.
<http://get.games.yahoo.com/proddesc?gamekey=monopolyherenow>

From: Rich Greenamyre (greenamyr001@hawaii.rr.com)
To: kaenapoint@yahoo.com
Date: Tuesday, September 25, 2007 3:02:35 PM
Subject: Kaena Point

As a frequent mountain biker at Kaena Point, I am in favor of protecting the unspoiled environment of the area. I am in favor of installation of a pest proof fence as long as it allows hikers and mountain bikes to traverse.

However, I have other recommendations. One is to keep the area unspoiled by not extending paved roads any further than they already are. A real parking lot should be built at the existing dirt lot on the Moluleia side with restroom facilities (like that on the Waianae side) and allow access to hikers and bikers. The other is to repair the washout on the Waianae side by putting in a reinforced wall like other areas of the path (old railroad bed) on that side.

Rich Greenamyre



Smvl520@aol.com
10/30/2007 10:29 PM

To [REDACTED],
[REDACTED]
cc [REDACTED]
[REDACTED]
[REDACTED]
bcc [REDACTED]
Subject Kaena...

October 29, 2007

Christen W. Mitchell
DOFAW Planner

Re: Request for a Traditional Cultural Properties (TCP) model - assessment, study and report - for your organization's proposed undertaking that may adversely affect our Ohana/families sites under the protection and recognition of 'Aha Kukaniloko/Koa Mana lineal descendants and those lineal descendants that we represent...

aloha mai e:

Thank you for considering a recommendation from 'Aha Kukaniloko/Koa Mana lineal descendants and those lineal descendants that we represent:

- * substantive consultation with 'Aha Kukaniloko/Koa Mana spokesperson
- * why do we see different boundaries
- * to know, to follow, to support protection law... [NHPA Section 106 TCP model law] the significance of interpretation for the "meaning of place" is critical to the spirit and intent of protection law and we understand that TCP law is hidden within the environmental law of the State of Hawaii
- * those identified sites and those sites that are not, are protected and recognized as national treasures by 'Aha Kukaniloko/Koa Mana and Ohana and we request that these sites and our traditional practices of care be protected to the utmost of the spirit and intent pursuant to domestic and international law
- * Ohana obligation to protect prior and continued traditional practices of care, sacred historic sites and inheritance upon Kaena, Oahu and all other like kind traditional cultural properties, connect [traditionally connect] to the "piko" Kukaniloko through published and verified documentation and Ohana cultural education programs and workshops
- * Following our programs and workshops, kupuna asks, "Now that you have learned about our connections, kuleana and concerns, what are we going to do to help us preserve, protect and perpetuate the right and kuleana for those Ohana/kanaka maui yet to come?"

'owau no me ka ha'a ha'a

Tom Lenchanko
kahuaka'i ola ko laila waha olelo 'Aha Kukaniloko/Koa Mana
mea ola kanaka maui
349-9949

See what's new at AOL.com and [Make AOL Your Homepage](#).

Response to The Kaena Point Fence Project by DLNR

Keona Mark
P.O. Box 2
Haleiwa, HI 96712
673-2778

This is in response to your handout regarding the proposed Fence Project at Kaena Point.

I am the 7th generation of my family who have been gathering pa'akai, limu, opihi, pipipi, lole, and I'a in Waialua Moku, from Waimea Valley to Kaena Point.

Any fencing at Kaena point will be detrimental to humans, birds and plants. By installing a fence you will not "preserve a precious piece of Hawai'i for future generations", you will be changing that piece of land forever. It will be an eyesore and it will not stop predatory dogs who are "brought by their owners" because "access will remain the same". The fence will "run along the base of the Waianae Mountains..and come down to the high tide line." How can you possibly say that it will not be an eyesore. No fence, especially at Kaena Point, can be "painted to blend into the background". Have you seen sunsets at Kaena? Have you been there at the break of day to see the changing colors of the ocean and the mountains?

The Laysan Albatross are some of the biggest and clumsiest birds who frequent Kaena. Although they are graceful in flight, their takeoff's and landings are influenced by the gusty winds of Kaena. Any fence will be harmful to these birds.

Almost every time DLNR tries to introduce measures (a fence in this case) that supposedly will compensate for threats to the survival of native species (tampering with Mother Nature) it backfires.

Is this fence the best alternative or the cheapest alternative you found? It won't keep out predatory dogs or cats. Have you thought of having personnel at Kaena Point and having access hours? Have you thought of leaving Mother Nature alone?

The challenge is not to build fencing at Kaena Point, it is to manage the people that frequent the area with no regard to plants, animals, or other people. I have been out there to see all the rubbish, road ruts, plows through native vegetation to create new 4wd paths, fireworks, pistol and rifle target practices, and fishing debris that people leave on the beaches and reefs. This fencing project is not the way to protect the area. It will irreparably harm the very uniqueness of Kaena you talk about.

I strongly oppose this fence project.

**Reed H. Matsuura
P.O. Box 11
Waialua, HI 96791
rmatsuura@honolulu.gov - phone – 223-1808**

**Ms. Christen Mitchell
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, HI 96813**


Dear Ms. Mitchell:

**RE: Predator-Proof Fencing at Ka`ena Point Natural
Area Reserve and Ka`ena Point State Park, Oahu.**

Being a lifetime resident of Mokuleia, Kaena Point has been my fishing and salt gathering area for years. I support the fencing as long as it does not prevent the users like myself from entering the area. The preservation of the fauna and wildlife must be a mandate for this last remaining pristine area of Oahu.

Kaena Point, was known as the jumping off point for Hawaiians. This sacred area must be protected. I have witnessed dirt bikes and atv's that have just torn up the area and have total disregard of the fauna or bird nesting areas.

Thus, I am in total support for this fencing and the protection of this area. Mahalo for accepting this testimony!

Sincerely,

Reed Matsuura

Cynthia K.L. Rezentes

87-149 Maipela Street
Wai'ananae, HI 96792-3154
E-mail: rezentesc@aol.com

October 15, 2007

Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, HI 96813

Attn: Christen Mitchell

RE: Pre-Consultation on Environmental Assessment for Predator-Proof Fencing at Ka'ena Point Natural Area Reserve and Ka'ena Point State Park, O'ahu, TMKs: 6-9-02:4, 9, 13, 14; 8-1-01:22

Aloha,

Thank you for the opportunity to provide comments regarding the proposed project for the Ka'ena Point Natural Area Reserve and Ka'ena Point State Park.

In general I do not support fencing of public natural areas which are accessible to the public.

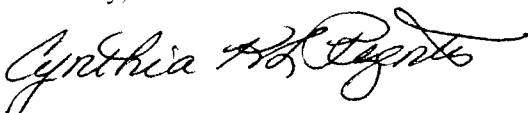
In this case, due to the tremendous pressures being placed upon the natural resources of the area and the destruction that is occurring due to natural predators of the ground nesting birds and vegetation, I would reluctantly agree to a predator-proof fence in the area.

Of the options presented in your letter, I would support Option 2, which allows free access from both the Mokuleia and Wai'ananae sides to *Leina a Ka Uhane*, a recognized significant cultural site.

In addition, I would recommend consultation with Native Hawaiian elders and organizations from both the Mokuleia and Wai'ananae sides of Ka'ena Point to determine the impacts on any further cultural sites, e.g. the Night Marchers Path that is known to many, burials, ect.

This fence would benefit the natural resources at Ka'ena Point and also protect a little bit of what can be found in the Northwestern Hawaiian Islands for the residents of O'ahu who do not have the opportunity to experience that unique resource.

Sincerely,



Cynthia K.L. Rezentes
Wai'ananae Resident

From: Steve Rohrmayr (crider2-2@hotmail.com)
To: kaenapoint@yahoo.com
Date: Wednesday, September 26, 2007 7:21:57 PM
Subject: Fence

I hope when this fence is constructed you will take into consideration the FACT that there is a trail going up the end of the Wai`anae Mt. range to various WW 2 pill boxes. Please DO NOT block this trail with any less access than the point in general.

Kick back and relax with hot games and cool activities at the Messenger Café. http://www.cafemessenger.com?ocid=TEXT_TAGHM_SeptHMtagline1